

Use Attainability Analysis

for

WBID 0383 Fishing River
Part 1 (Sites 82-87)

Submitted by
Tetra Tech, Inc

To
Missouri Department of Natural Resources
Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

APR 6 2005

Data Sheet A - Water Body Identification

WATER PROTECTION PROGRAM

Water Body Name: (from USGS 7.5' quad) <u>FISHING RIVER; 82-87 ; 304-308</u>	
8-digit HUC: <u>10300101</u>	
Missouri WBID #: <u>0383</u>	
County: <u>CLAY</u>	
Upstream Legal Description:	
Downstream Legal Description:	
Upstream Coordinates: (UGS 84, ddd.ddddd)	^{Sites 82-87} $\left(39.29225 \quad -094.45418 \right)$
Downstream Coordinates: (UGS 84, ddd.ddddd)	^{Sites 304-308} $\left(39.33131 \quad -094.33736 \right)$
Discharger Facility Name(s): <u>KC, FISHING RIVER WWTP</u>	
Discharger Permit Number(s): <u>MD-0048313</u>	
Number of Sites Evaluated: <u>11</u>	
Name of Surveyor and Telephone Number: <u>Adam Pettig; 410-356-8993</u>	
Organization: <u>TGT&A T&H INC.</u>	
Position: <u>ASSOCIATE SCIENTIST</u>	

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Adam Pettig Date: 3/29/05



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>082</u>	Site Location Description: <u>70m DS FROM R533 BRIDGE @ BIG LOST TREE</u> (COTTONWOOD)	
Site GPS Coordinates: <u>39.34011 / -94.36155</u>	Facility Name: <u>KC FISHING R. WWP</u>	
Date & Time: <u>3/14/05</u> ^{AVR} <u>1530</u>	Permit Number:	
Personnel: <u>AVR; AMG</u>	Weather Conditions for Past 7 days: <u>SUNNY; DRY</u>	
Current Weather Conditions: <u>SUNNY 50°</u>		
Photo Ids: Upstream: <u>1539C</u>	Downstream: <u>1540C</u>	Other: <u>1541C - FOOT PATH ALONG STREAM</u>

Uses Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input checked="" type="checkbox"/> Trapping <u>AVR</u>	<input checked="" type="checkbox"/> Fishing <u>AVR</u>	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

ASSUMED ACTIVITY BASED ON CONDITIONS & LOCATION - AVR

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input checked="" type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input checked="" type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

QC - Ann Marie Gorka 3-14-05

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>10.8m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.8m</u>	Max. Depth (ft): <u>1.2m</u>
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>4m³/s</u> <u>0.144m/s</u>	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Run	Width (ft): <u>7.4m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.53m</u>	Max. Depth (ft): <u>0.75m</u>
<input type="checkbox"/> Pool	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>0.162m/s</u>	

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
		<u>10</u>	<u>40</u>		

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>NA</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

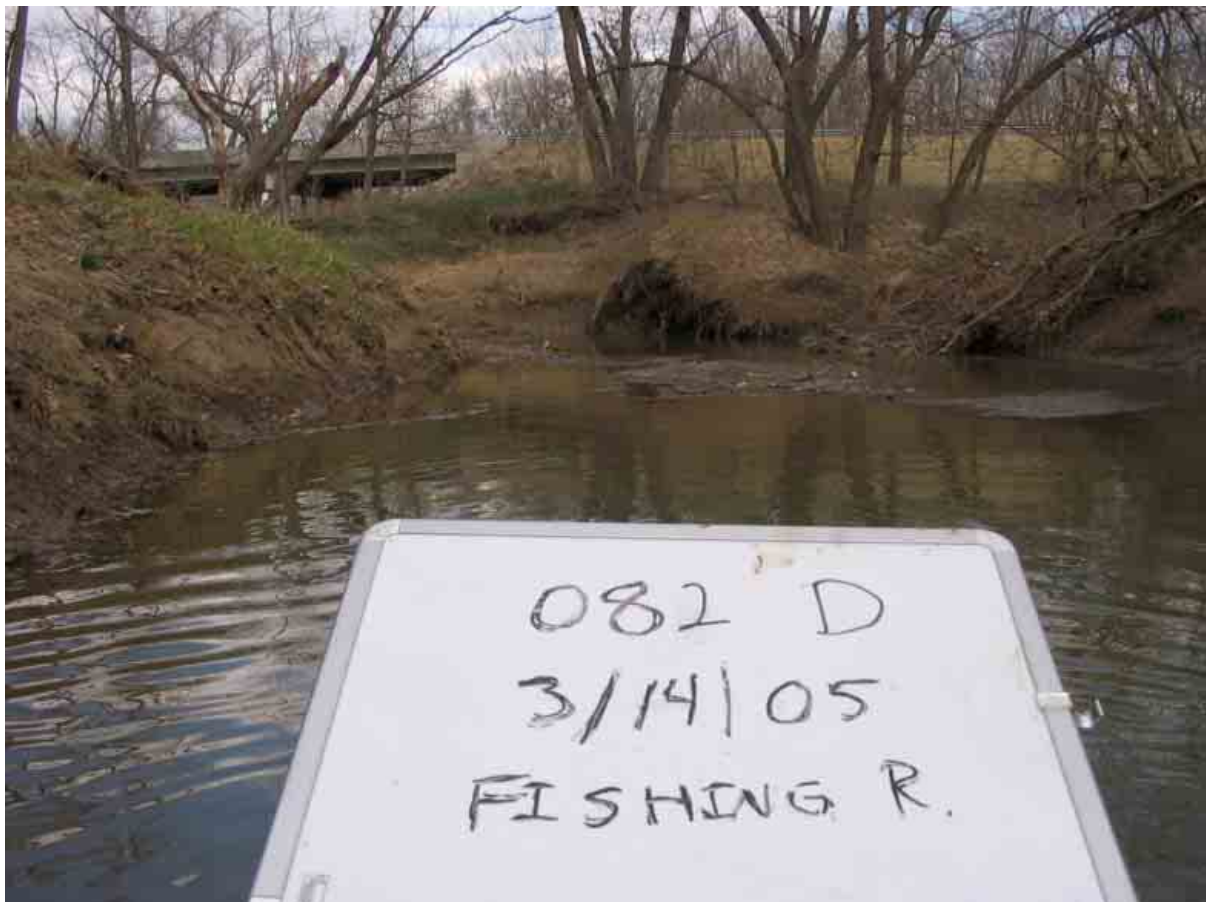
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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Adam Rethy Date: 3/14/05

Organization: TE-BLT Position: SCI I.

OC. A. Marie Hark 3-14-05



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 683	Site Location Description:	
Site GPS Coordinates: 39.33870 / -94.39343	@ BRK SYCAMORE, 200 @ + OF 136 ST + NATIONAL RD.	
Date & Time: 3/14/05	Facility Name: Mr. FISHING RUNWAY	
Personnel: AVR + AMG	Permit Number:	
Current Weather Conditions: SUNNY 50°	Weather Conditions for Past 7 days: SUNNY, DRY	
Photo Ids: Upstream: 1538C	Downstream: 1535C	Other: 1536 - ALGAE + PROCCURANT

Uses Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input checked="" type="checkbox"/> Trapping - AVR	<input checked="" type="checkbox"/> Fishing - AVR	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

~~APPROX 4 REFS BASED ON LOCATION + CONFIRMED AVR~~

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: Drain Knott Pipe				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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QC = *[Signature]* 3/14/05

Stream Morphology:

Upstream View Physical Dimensions: 0.04, .03, .02

<input checked="" type="checkbox"/> Riffle	Width (ft): <u>11.1m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.056m</u>	Max. Depth (ft): <u>.19</u>
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Pool	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>0.662 m/s</u>		

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Run	Width (ft): <u>5m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.156m</u>	Max. Depth (ft): <u>0.25m</u>
<input type="checkbox"/> Pool	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>0.317 m/s</u>		

Substrate*: (These values should add up to 100%.)

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	<u>100</u> % Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>Algae & flocculants</u>	<u>12 sec</u>	<u>7.5</u>
	<u>10 sec</u>	<u>7.5</u>
	<u>12 sec</u>	<u>7.5</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

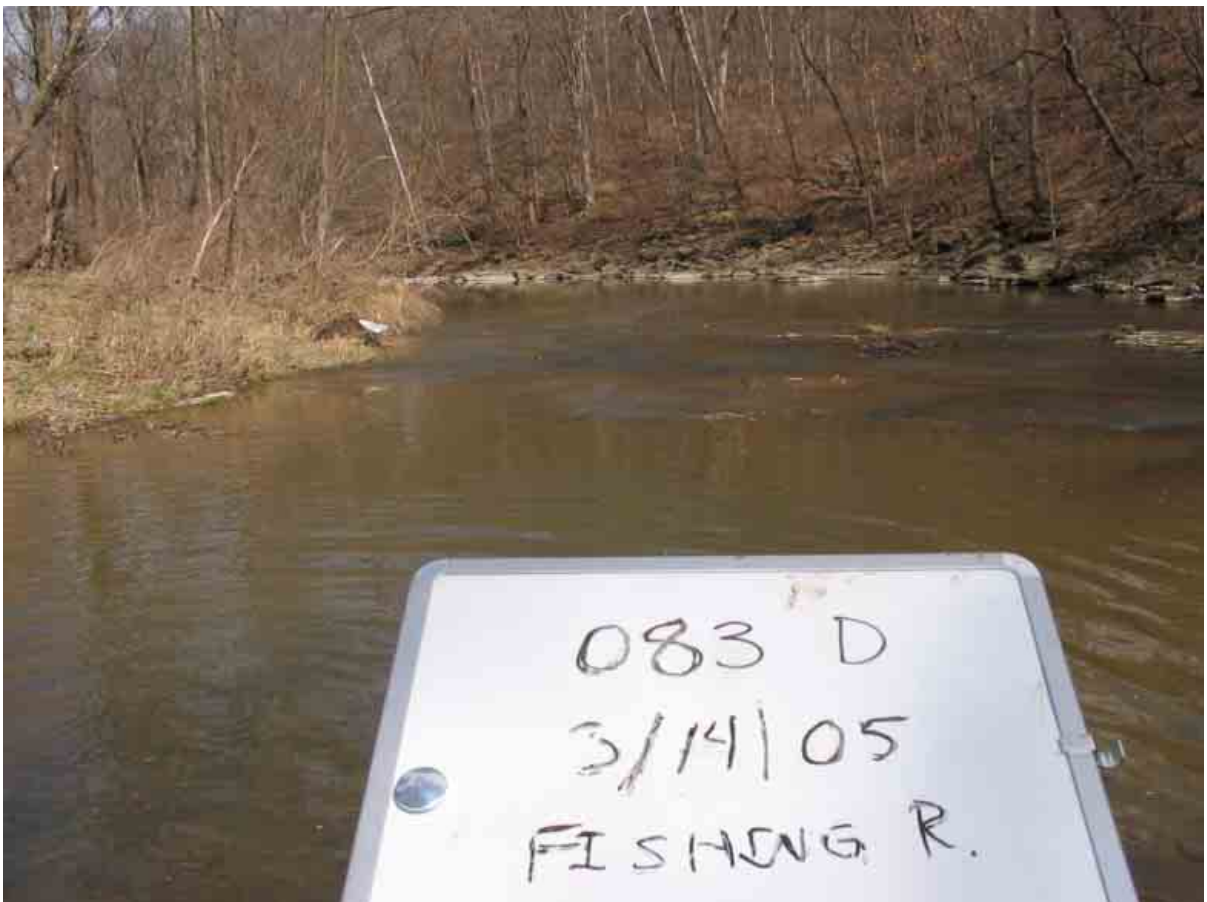
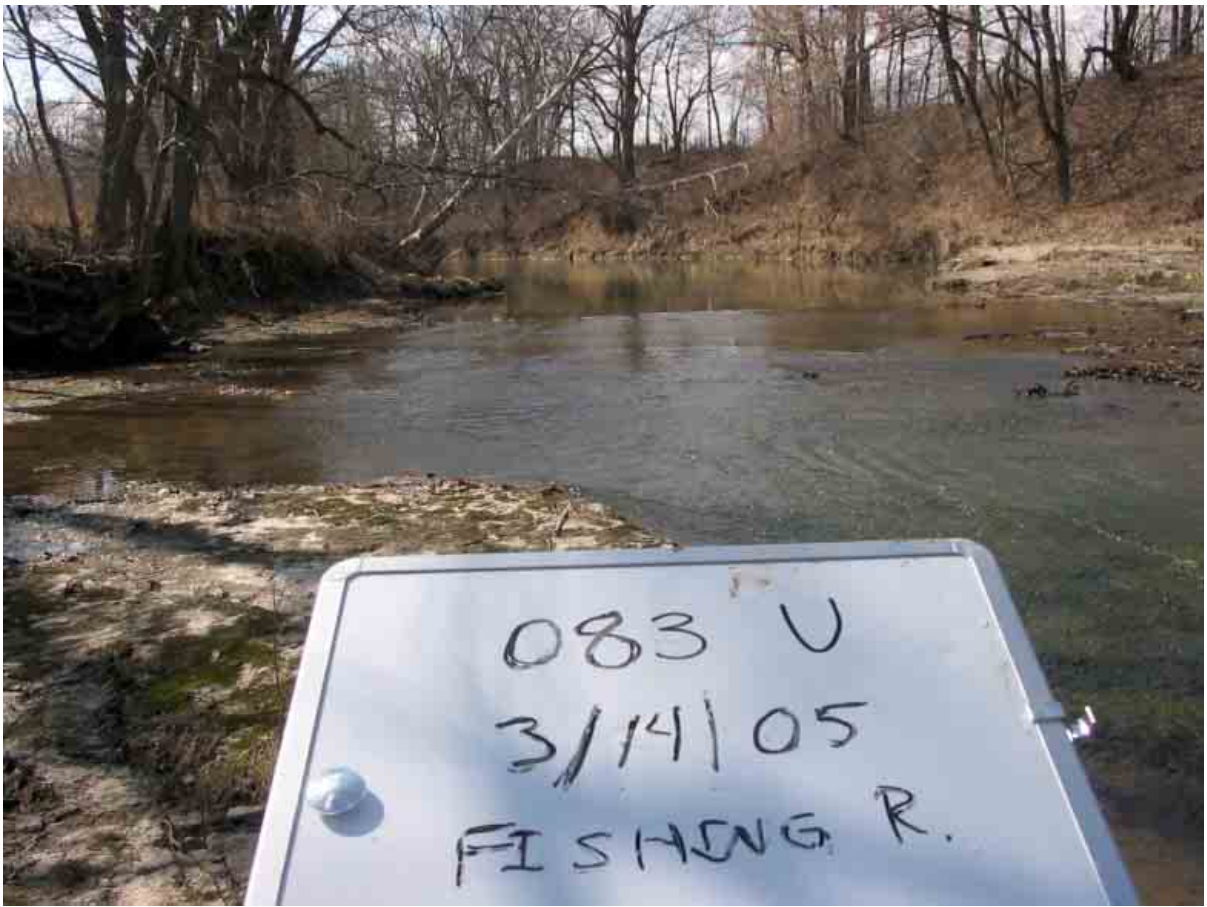
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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Cydon R. Tully Date: 3/14/05

Organization: TE-BLT Position: SR I.

Debra Marie Foster 3-14-05





Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>084</u>		Site Location Description:	
Site GPS Coordinates: <u>39.32928 / -94.41671 (NCR2)</u>		<u>OFF OF RD. NEXT TO OLD BRIDGE, UNDER NEW ONE</u>	
Date & Time: <u>3/14/05, 1330 hrs</u>		Facility Name: <u>KC, FISHING R.; WOSP</u>	
Personnel: <u>AR, AMG</u>		Permit Number:	
Current Weather Conditions: <u>Sunny; 50°</u>		Weather Conditions for Past 7 days: <u>Sunny; Dry</u>	
Photo Ids: Upstream: <u>1533 C</u>	Downstream: <u>1534 C</u>	Other:	

Uses Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input checked="" type="checkbox"/> Kayaking / <u>AVR</u>	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input checked="" type="checkbox"/> Trapping <u>AVR</u>	<input checked="" type="checkbox"/> Fishing <u>AVR</u>	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.) <u>All observed activities listed on upstream section AVR</u>				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes / <u>BANKS</u>	<input checked="" type="checkbox"/> Other: <u>OLD BRIDGE</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>BEAR CAMP</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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QC = Arman Gite 3-14-05

Page Two - Data Sheet B for WBID # 084:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): 12.3m	Length (ft): 20m	Avg. Depth (ft): 0.794m	Max. Depth (ft): 0.85m
<input type="checkbox"/> Flow	Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	NA Too slow	Estimated (ft ³ /sec):	0.093 m/s

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft): 0.4m
<input checked="" type="checkbox"/> Pool	Width (ft): 13.5m	Length (ft): 20m	Avg. Depth (ft): 0.31	Max. Depth (ft): 0.6
<input type="checkbox"/> Flow	Present? <input type="checkbox"/> Yes <input type="checkbox"/> No		Estimated (ft ³ /sec):	

Substrate*: (These values should add up to 100%.)

% Cobble	50	% Gravel		% Sand	50	% Silt		% Mud/Clay		% Bedrock	
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

NA

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

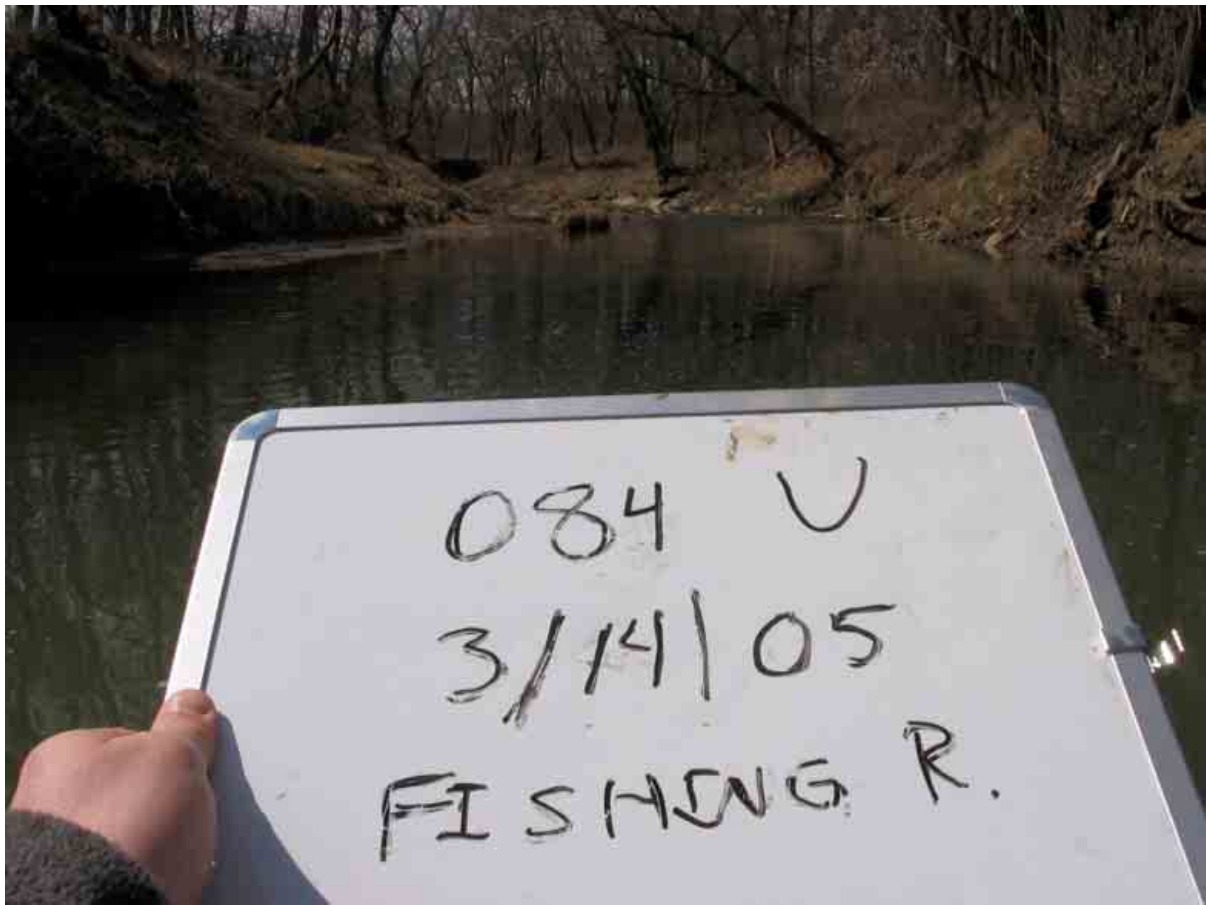
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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

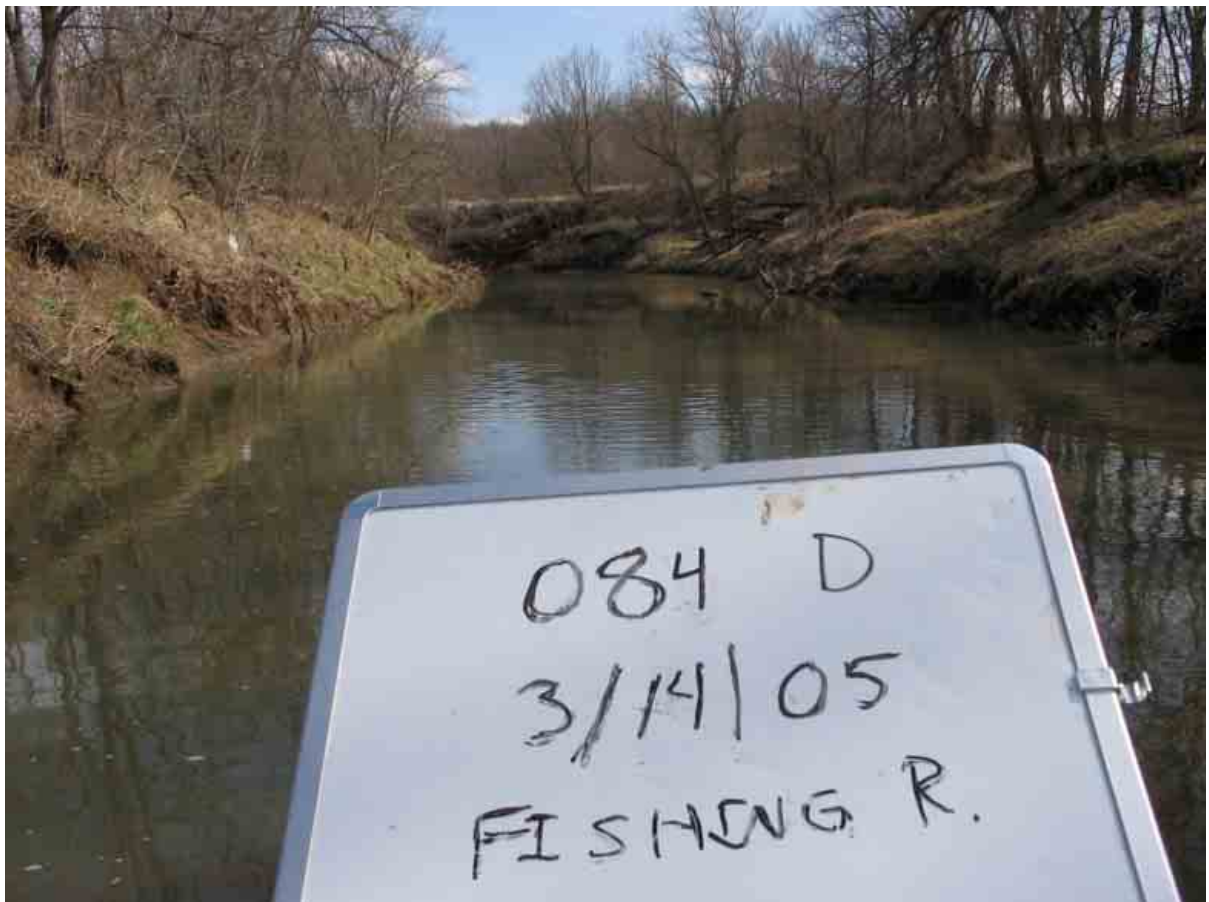
Signed: Adam Rott Date: 3/14/05

Organization: TE - BLT Position: REI, I

QC: Am Man Lake 3-14-05



084 V
3/14/05
FISHING R.



084 D
3/14/05
FISHING R.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>085</u>	Site Location Description:	
Site GPS Coordinates: <u>39.31313/094.93156 (n=17)</u>	<u>300M FROM END OF GRAVEL LN.</u>	
Date & Time: <u>3/14/05 1200</u>	Facility Name: <u>KR, FISHHILL R WWTP</u>	
Personnel: <u>AMR, AMG</u>	Permit Number:	
Current Weather Conditions: <u>Sunny 45</u>	Weather Conditions for Past 7 days: <u>Sunny Dry</u>	
Photo Ids: Upstream: <u>1530C</u>	Downstream: <u>1531-32C</u>	Other:

Uses Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input checked="" type="checkbox"/> Tubing <u>AMR</u>	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input checked="" type="checkbox"/> Kayaking <u>AMR</u>	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input checked="" type="checkbox"/> Trapping <u>AMR</u>	<input checked="" type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

~~ALL AS ALL APPEAR TO BE PLACED AT FISHHILL~~

HELEN DICKLISH; LIVES IN CEDAR HURF @ TOP OF HILL SAYS NEIGHBORS FISH, MOORE

SUNNY.

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes <u>BANKS</u>	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>LAWNS & HURF</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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QC = Anne Hulse 3-14-05

.8, .8, .5, .91, .6

Stream Morphology:

Upstream View Physical Dimensions:

N31.31276 W 094.43156

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>5.5m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.72m</u>	Max. Depth (ft): <u>1.1m</u>
<input type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>NA TGS xlvw</u> Estimated (ft ³ /sec):			

Downstream View Physical Dimensions:

N31.31325 W 094.43140

0.75, .75, .15, 1.1, .67

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>14.1m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.68m</u>	Max. Depth (ft): <u>1.2m</u>
<input type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>NA</u> Estimated (ft ³ /sec): <u>TGS seen</u>			

Substrate*: (These values should add up to 100%.)

% Cobble	<u>40</u>	% Gravel		% Sand	<u>60</u>	% Silt		% Mud/Clay		% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>YES, some COONTAIL OR MILFOON w/ ALGAE</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Adam Bette Date: 3/14/05Organization: Tx - Austin MUD Position: SCIENTIST

QC - Amani Gabe 3-14-05
ITEM 1 Env. Scientist



085 U
3/14/05
FISHING R.



MISSOURI RECREATIONAL USE STREAM SURVEY FIELD AUDIT CHECKLIST

Evaluation Date: 03-14-2005		
Audit Team Member(s):		
Name	Organization	Phone
CHAD BARBOUR	TL-OwINGS MILLS	410-356-8993
JERAMY ROBEEN	TETRA TECH-EMI	314-892-6322 x32
Site ID: 86	Stream Name: FISHING RIVER	
Field Team Members		
1 ADAM BETTIG	3	5
2 ANN MARIE GOETZE	4	6
Other Observers Present During Evaluation:		
Name	Organization	Phone

AUDIT CHECKLIST

GPS used to obtain fix at or near site?	<input checked="" type="radio"/> Y	N	N/A
GPS data recorded on field form?	<input checked="" type="radio"/> Y	N	N/A
Photographs of site taken (if appropriate)?	<input checked="" type="radio"/> Y	N	N/A
Placard with site ID printed on it is the first photograph?	<input checked="" type="radio"/> Y	N	N/A
Picture file number recorded on Field Form?	<input checked="" type="radio"/> Y	N	N/A
Mean channel width at X-site determined based on measurement?	Y	N	<input checked="" type="radio"/> N/A
Area around site inspected for evidence of primary contact recreational and other human uses?	<input checked="" type="radio"/> Y	N	N/A
Pictures of evidence of uses taken?	Y	N	<input checked="" type="radio"/> N/A
Picture file number recorded on field forms?	<input checked="" type="radio"/> Y	N	N/A
Measured upstream channel width at representative transect?	<input checked="" type="radio"/> Y	N	N/A
Measured downstream channel width at representative transect?	<input checked="" type="radio"/> Y	N	N/A
Measured average depth in upstream portion of the site?	<input checked="" type="radio"/> Y	N	N/A
Measured maximum depth in downstream portion of the site?	<input checked="" type="radio"/> Y	N	N/A
Was a reasonable effort made to locate deepest point at each site?	<input checked="" type="radio"/> Y	N	N/A
Velocity measured in the upstream portion of the site using a neutrally buoyant object along measured length timed and recorded correctly for at least three trials?	Y	N	^{F1} <input checked="" type="radio"/> N/A
Velocity measured in the downstream portion of the site using a neutrally buoyant object along measured length timed and recorded correctly for at least three trials?	Y	N	^{F1} <input checked="" type="radio"/> N/A
Does auditors assessment of substrate types and proportions at the site agree with that of the field team?	<input checked="" type="radio"/> Y	N	N/A
Were interviews conducted with available residents?	Y	<input checked="" type="radio"/> N	N/A
Are the field sheets filled out completely and signed at the end of the site assessment?	<input checked="" type="radio"/> Y	N	N/A
Did the field team QC officer inspect the field forms for completion prior to leaving the site?	<input checked="" type="radio"/> Y	N	N/A
Overall, were the field sampling protocols followed correctly?	<input checked="" type="radio"/> Y	N	N/A

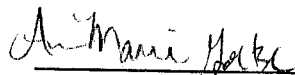
SIGNATURES



Evaluator

3-14-05

Date



Team Representative

3/14/05

Date

F1- VELOCITY NOT MEASURABLE
DUE TO LOW VELOCITY + WIND.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 0860	Site Location Description: @ BRIDGE, NEXT TO HAWKS W / BILL LAMMS
Site GPS Coordinates: 39.31080 / -94.4362	POND NEAR BY: OFF 'A' + NE 120TH
Date & Time: 9:00 AM (Accuracy 18 ft)	Facility Name: KC FISHING R. WTP
Personnel: AVR; AG	Permit Number:
Current Weather Conditions: Sunny 40's	Weather Conditions for Past 7 days: Sunny Day
Photo Ids: Upstream: 1527C	Downstream: 1528-1529C Other:

Uses Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input checked="" type="checkbox"/> Kayaking AVR	<input type="checkbox"/> Boating	<input checked="" type="checkbox"/> Wading AVR	<input type="checkbox"/> Rafting
<input checked="" type="checkbox"/> Hunting AVR	<input checked="" type="checkbox"/> Trapping AVR	<input checked="" type="checkbox"/> Fishing AVR	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

N/A

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes / BANKS	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input checked="" type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: BEER CANS				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

OK - Amb 3-1475

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>10m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.56m</u>	Max. Depth (ft): <u>0.75m</u>
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>NA too slow</u>	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Run	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Pool	Width (ft): <u>11.7m</u>	Length (ft): <u>20m</u>	Avg. Depth (ft): <u>0.57m</u>	Max. Depth (ft): <u>0.95m</u>
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>NA too slow</u>	

Substrate*: (These values should add up to 100%.)

% Cobble	<u>20</u>	% Gravel		% Sand	<u>80</u>	% Silt		% Mud/Clay		% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>NO</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 3/14/05

Organization: TE Position: Env. Scientist

An Mami Moke
TTMTI

3-1405
Env. Scientist





MISSOURI RECREATIONAL USE STREAM SURVEY FIELD AUDIT CHECKLIST

Evaluation Date: 3/14/05		
Audit Team Member(s):		
Name	Organization	Phone
CHAD BARBAR		
ADAM RETZG	TE	410-356-8943
AUN MARIE GOETZE	TE - EML	314-314-892-6322
Site ID: 087	Stream Name: PISHING R	
Field Team Members		
1 CHAD BARBAR	3	5
2 JEREMY ROSEN	4	6
Other Observers Present During Evaluation:		
Name	Organization	Phone
CHAD	TE - CREDIT MGR	410-356-8943
JEREMY	TE - EML	314-893-6322

AUDIT CHECKLIST

GPS used to obtain fix at or near site?	<input checked="" type="radio"/> Y	N	N/A
GPS data recorded on field form?	<input checked="" type="radio"/> Y	N	N/A
Photographs of site taken (if appropriate)?	<input checked="" type="radio"/> Y	N	N/A
Placard with site ID printed on it is the first photograph?	<input checked="" type="radio"/> Y	N	N/A
Picture file number recorded on Field Form?	<input checked="" type="radio"/> Y	N	N/A
Mean channel width at X-site determined based on measurement?	<input checked="" type="radio"/> Y	N	N/A
Area around site inspected for evidence of primary contact recreational and other human uses?	<input checked="" type="radio"/> Y	N	N/A
Pictures of evidence of uses taken?	<input checked="" type="radio"/> Y	N	N/A
Picture file number recorded on field forms?	<input checked="" type="radio"/> Y	N	N/A
Measured upstream channel width at representative transect?	<input checked="" type="radio"/> Y	N	N/A
Measured downstream channel width at representative transect?	<input checked="" type="radio"/> Y	N	N/A
Measured average depth in upstream portion of the site?	<input checked="" type="radio"/> Y	N	N/A
Measured maximum depth in downstream portion of the site?	<input checked="" type="radio"/> Y	N	N/A
Was a reasonable effort made to locate deepest point at each site?	<input checked="" type="radio"/> Y	N	N/A
Velocity measured in the upstream portion of the site using a neutrally buoyant object along measured length timed and recorded correctly for at least three trials?	<input checked="" type="radio"/> Y	N	N/A
Velocity measured in the downstream portion of the site using a neutrally buoyant object along measured length timed and recorded correctly for at least three trials?	Y	N	<input checked="" type="radio"/> N/A
Does auditors assessment of substrate types and proportions at the site agree with that of the field team?	<input checked="" type="radio"/> Y	N	N/A
Were interviews conducted with available residents?	Y	<input checked="" type="radio"/> N	N/A
Are the field sheets filled out completely and signed at the end of the site assessment?	<input checked="" type="radio"/> Y	N	N/A
Did the field team QC officer inspect the field forms for completion prior to leaving the site?	<input checked="" type="radio"/> Y	N	N/A
Overall, were the field sampling protocols followed correctly?	<input checked="" type="radio"/> Y	N	N/A

too slow

SIGNATURES

 3/14/05
Evaluator Date

 3/14/05
Team Representative Date



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 87	Site Location Description: UNDER CUBED BRIDGE ON ROUTE
Site GPS Coordinates: N 39.2725 W 094.45481	
Date & Time: 03-14-05	Facility Name: KC. FISHING RIVER WWTP
Personnel: CHAD GAMBOLD, JENAMY BOOREN	Permit Number:
Current Weather Conditions: 39° SUNNY	Weather Conditions for Past 7 days:
Photo Ids: Upstream: 1527 (CGB)	Downstream: 1528 (CGB) Other: 1529 - ROPE SWING

CGB 1527B no Recreation Pictures 1528B

Uses Observed*:

<input checked="" type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input checked="" type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input checked="" type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input checked="" type="checkbox"/> Trapping	<input checked="" type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)
PHOTO #1529 ROPE SWING UNDER BRIDGE

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input checked="" type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input checked="" type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

JTR 03/14/05

September 29, 2004

Stream Morphology:

Upstream View Physical Dimensions: 0.02, 0.025, 0.3, 0.5, 0.45

<input type="checkbox"/> Riffle	Width (ft): <u>4.5 (m)</u>	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Run	Width (ft): <u>4.5 (m)</u>	Length (ft): <u>20 (m)</u>	Avg. Depth (ft): <u>0.26</u>	Max. Depth (ft): <u>0.5 m</u>
<input type="checkbox"/> Pool	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>1 min = 4m; 1 min = 4.8m; 1 min = 6.7m</u>		

Flow = 0.08 m/s

Downstream View Physical Dimensions: 0.03, 0.22, 0.03, 0.05, 0.03

<input type="checkbox"/> Riffle	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input checked="" type="checkbox"/> Run	Width (ft): <u>1.3 (m)</u>	Length (ft): <u>20 (m)</u>	Avg. Depth (ft): <u>0.03 (m)</u>	Max. Depth (ft): <u>0.05 (m)</u>
<input type="checkbox"/> Pool	Width (ft):	Length (ft):	Avg. Depth (ft):	Max. Depth (ft):
<input type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Estimated (ft ³ /sec): <u>F1 -</u>		

F1 - Could not measure low velocity
neb. a.w. in.

Substrate*: (These values should add up to 100%.)

10 % Cobble	% Gravel	% Sand	30 % Silt	10 % Mud/Clay	10 % Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

ALGAE GROWING ON ROCKS ON UPSTREAM REACH.

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: [Signature] Date: 03-14-05

Organization: TETRA TECH INC. Position: ASSOCIATE SCIENTIST

JTR - 03/14/05



